

551024

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number
WO 2004/087322 A2

(51) International Patent Classification⁷:**B01L 3/00**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/IB2004/050345

(22) International Filing Date: 26 March 2004 (26.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03100892.3

4 April 2003 (04.04.2003) EP

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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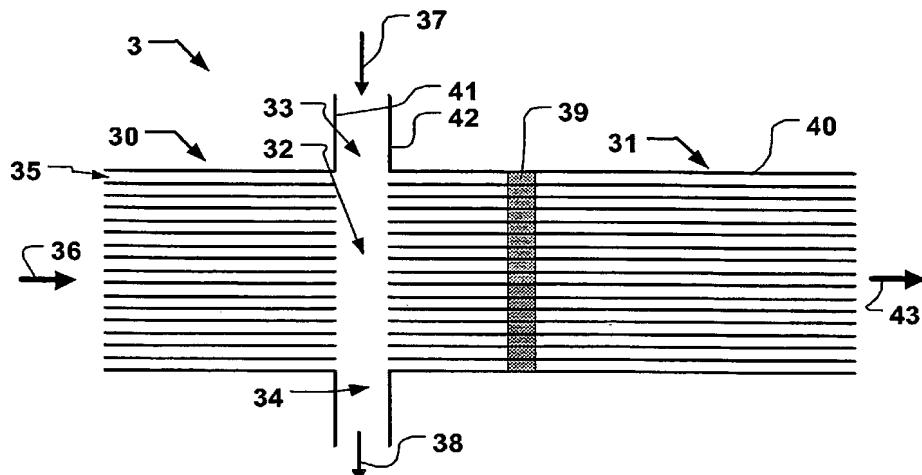
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Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,

[Continued on next page]

(54) Title: FLUID PARTITIONING IN MULTIPLE MICROCHANNELS



(57) Abstract: A device (3) and method to generate independent fluid samples (51) for multichannel analysis, preferably in diagnostic cartridges, are disclosed according to the invention. A fluidic device (3), preferably a microfluidic device, has a plurality of fluid channels (35). Fluids are transported in the fluid channels. A cross-over channel (32) has a fluid inlet (33) and a fluid outlet (34). In use of said device (3), a method is performed. According to the method, the sample channels are filled with sample fluid up to a threshold (39). A flush fluid (gas or inert liquid) is then flushed through the sample-filled cross-over channel, replacing the sample fluid with flush fluid. Subsequently the cross-over channels' inlet and outlet are closed and the sample fluid is pushed further into the channel arrays (30, 31). Alternatively, an appropriate pressure is applied to the fluid in order to push the fluid into said sample channels. The method steps are repeated in an appropriate way if it is desired to obtain multiple (in time and/or space) independent sample plugs in the microchannels. Thus a series of longitudinally spaced independent sample fluid segments separated from each other by flush segments is created in each microchannel.

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TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD,
SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
TD, TG)

Published:

— without international search report and to be republished
upon receipt of that report

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